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ABSTRACT

This cross-sectional study, which was designed to assist in the provision of appropriate educational alternatives for students, presents a profile of elementary students who were retained in first grade at Horseheads Central Schools, Little Falls, New York. The study group was the class of 1995-96, currently in grade 4. A total pupil population of 340 students was studied, of which 3 students were retained in kindergarten, 29 were retained at grade 1, 7 at grade 2, and 8 at grade 3. Discussion focuses on retentions disaggregated by school, gender, intelligence, participation in free and reduced cost lunch programs, achievement at grade 3, age, mobility, and mothers' education. It was concluded that: (1) some retained students have screening intelligence quotients, suggesting that they may have a handicapping condition; (2) a high proportion of "younger" students were retained; and (3) the socioeconomic indicators of mothers' education and participation in the free lunch program were related to the incidence of retention, as well as gender, lower intelligence, lower tested grade 1 achievement, and younger chronological age. Due to differences in average achievement performance and tested intelligence for retained pupils, the Horseheads Central School District should consider adopting retention guidelines. (RH)

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CORRELATES OF ELEMENTARY SCHOOL RETENTION: A CASE STUDY

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This study presents a profile of retained elementary students at Horseheads Central Schools. This is a cross-sectional study, as such care must be taken not to infer causal relationships among variables. The report presents information relative to student characteristics as well as achievement information before and after retained year (i.e. Grade 1). This is an important study which reveals a more complete picture of the correlates of pupil retention. A greater understanding of the pupil profile will assist in providing the appropriate educational alternatives for students.

POPULATION STUDIED:

The study group was the class of 1995-96, currently in grade 4. A total pupil population of 340 students was studied, of which 3 students were retained at grade K, 29 were retained at grade 1, 7 students were retained at grade 2, and 8 students were retained at the end of grade 3. The frequency of students retained by grade reveals that most retentions occur in Grade 1. Almost 14 percent of the student population was retained at or before Grade 3. The rationale for retentions at different grades needs to be discussed. For

example, why is grade 1 the most probable year for retentions and what student characteristics result in retention at grade K or later grades (i.e. grade 2 or above)?

RETENTIONS DISAGGREGATED BY SCHOOL:

Table 1 lists the percent of students retained at grade 1 disaggregated by school. Retention rates varied from a low of 4.8% at Big Flats School to a high of 14.5% at Center Street and Gardner Road Schools. Both Center Street and Gardner Road Schools stand out as having the highest building retention rates. It can be seen that there is a wide variability between retention rates among schools at the end of grade 1. Remember that this data does not include retention rates for other grade levels, that is, Grades K, 2, and 3. Table 2 depicts the national percentile of retained students by school at the end of grade 1, grade 1 retained, and grade 3 on the Total Reading and Math Tests. Note that reading achievement at the end of grade 1 is superior to mathematics achievement. Note that although Gardner Road had the highest retention rate, its grade 1 mean percentile for retained pupils is also the lowest in the district. Also, note that Sing Sing Road had an average percentile for retained pupils of 40.67 (there were only 3 pupils who were retained). This suggests that the probability of retention is related to the overall achievement at the school, and opens up the need to determine whether or not the district would like to have district-wide retention standards. For example, would administrators consider a minimum standardized achievement score whereby if the student scored above that level, then retention should not be considered. If that were determined to be the case, then that score should be set, based on what is known about the achievement of retained and non retained students in the year preceeding retention.

TABLE 1
RETENTION BY SCHOOL, GRADE 1 ONLY

	RETAINED	STUDY POPULATION	PERCENT RETAINED
BF	3	63	4.8
CS	12	83	14.5
GR	8	55	14.5
RR	3	61	4.9
SS	3	78	3.9

TABLE 2
*RETENTION STUDY DATA - NATIONAL PERCENTILES **

NAME/SCHOOL	READING			MATH		
	GRADE 1 YR.5/83	GR.1-RET. YR.5/84	GRADE 3 YR.5/86	GRADE 1 YR.5/83	GR.1-RET. YR.5/84	GRADE 3 YR.5/86
BIG FLATS--AVERAGES:	32.67	65.33	22.33	45.33	57.33	22.33
CENTER ST.--AVERAGES:	23.00	65.67	41.67	33.42	61.83	53.50
GARDNER RD--AVERAGES:	18.11	74.41	34.96	31.49	61.87	52.61
RIDGE RD--AVERAGES:	25.33	71.33	62.00	38.00	72.67	64.67
SING SING--AVERAGES:	40.67	85.67	64.00	40.00	79.33	72.33
DISTRICT AVERAGES:	24.55	71.00	42.00	35.21	64.31	53.10

* Care should be exercised not to over-interpret cells with a small "N".

GENDER:

Approximately 61% of retained students were male. This is consistent with published research. Research also points to greater numbers and male students in remedial and handicapped programs. Is equal educational opportunity being achieved for male students?

INTELLIGENCE:

The Grade 3 Otis-Lennon mean IQ for retained and non-retained students was 87.6 and 106, respectively. The IQ range for retained students varied between extremes of 65 and 108. A frequency distribution of IQ for retained students is presented in Table 3. Note that there are four missing

observations in Table 3 below. The grade 3 IQ of students who were retained at grade 1 varied widely. It would be appropriate to determine whether pupil ability in terms of measured intelligence is a critical variable in order to determine retention. Many times pupils with handicapping conditions are not retained, but are alternatively placed in non-graded classes or promoted. Is grade 1 the appropriate grade level for retention and how does a programmatic decision to retain the pupil interact with other information that is known about the child.

The district may wish to consider an IQ score below which a pupil should not be considered for retention at or above grade 3. Remember, the IQ data presented in Table 3 are from the Otis-Lennon Test. The findings suggest that retained pupils generally have a lower IQ. However, some retained pupils have IQ's in the average ability range. Would they be candidates for a transition room program? Also, are some of the retained pupils candidates for handicapped programs?

TABLE 3

FREQUENCY DISTRIBUTION - RETAINED IQ
GRADE 3 OTIS-LENNON TEST

VALUE	FREQUENCY
65.00	1
67.00	1
72.00	2
74.00	1
78.00	3
80.00	2
83.00	1
85.00	2
86.00	1
87.00	1
92.00	1
93.00	1
95.00	3
97.00	1
100.00	1
105.00	2
108.00	1

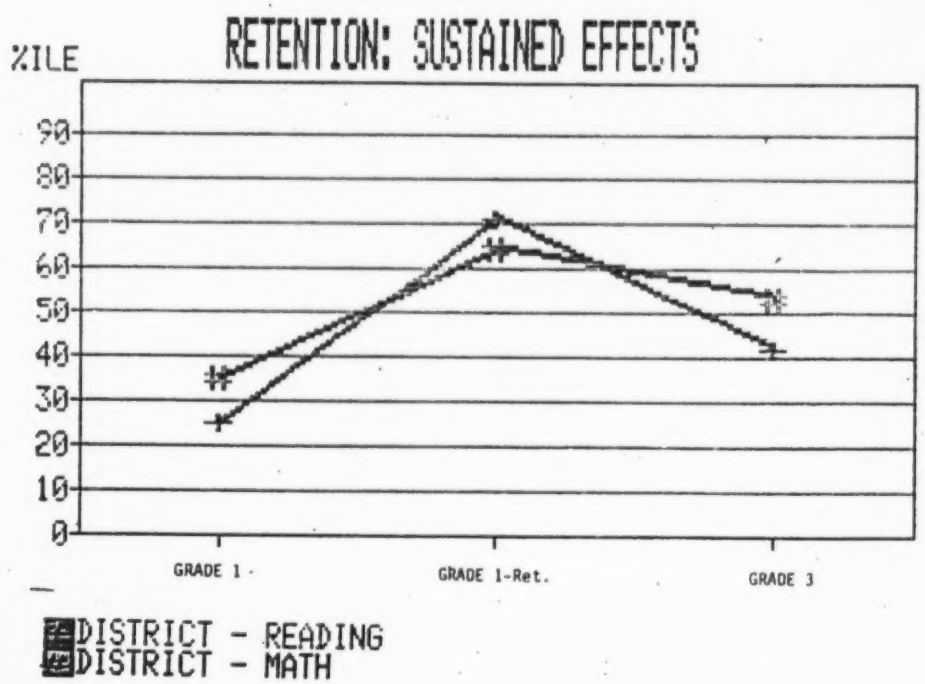
FREE AND REDUCED LUNCH:

The percent of students designated as recipients of free and reduced lunch was higher for retained than non-retained pupils (Retained 36.4%, Non-Retained 17.3%). Thus, we might hypothesize that socio-economic factors play a role in the probability of pupil retentions. If this is the case, then a proactive approach should be planned to insure equal educational opportunities for this group.

ACHIEVEMENT AT GRADE 3:

Does retention improve subsequent long-term achievement? Figure 1 presents a sustained effects analysis based on model A1 of the ESEA/Chapter I reporting system. In this model, no control group is available. Thus, the analysis uses the normative reference group as a control. The figure may be interpreted to indicate higher achievement performance after the retained year with sustained effects at grade 3.

FIGURE 1



***AGE*:**

The age in months on 1/1/87 was 114 for retained and 117 for non-retained pupils. There is an average of a quarter of a year difference between retained and non-retained students. As expected, retained students were generally younger. It is interesting to note that 36.4% of the retained pupils had chronological ages of 111 months or younger, whereas, only 12.7% of non-retained pupils were 111 months or younger. The combination of low IQ and level of maturation development may be especially predictive of retention. Unfortunately, Horseheads Central School District does not currently test for the developmental (maturational) level of pupils. It is well-established that mental ability is positively correlated with chronological age. Thus, delaying a pupil's entry to school or a transition room program has the potential of enhancing *"grade level"* ability for some students. However, delaying a pupil's entry could result in a deprivation of needed educational services.

***MOBILITY*:**

The mobility rate between schools was almost identical for retained and non-retained pupils. Nationally, higher mobility is related to lower achievement. However, this cross-sectional comparison does not suggest that pupil mobility is related to the incidence of retention at Horseheads.

***MOTHER'S EDUCATION*:**

Six percent of retained students had mothers with college degrees. Twenty-five percent of non-retained pupils had mothers who attended college. Mother's lack of education appears to be related to pupil retention. One might question if the same genetic factors which influence mother's educational success were imparted to the child. Alternatively, the issue

might be seen as related to the ability and willingness of the mother to nurture the child. Certainly, father's education has been found to be less related to pupil achievement than mother's education. So the nurturing hypothesis receives some support. The view of the nurturing role of the parent is clearly consistent with Lezotte's ***teaching and learning function*** and not the ***sorting and selecting function of schools***.

CONCLUSIONS:

1. Some students who are retained generally have screening intelligence quotents which would suggest that they may have a handicapping condition. As such, great care should be taken to insure that retention is in the best interest of the child. A low mental ability is suggestive of the fact that the child could be considered for retention by regular classroom teachers at many future grade levels. Their remedial needs should programmatically and socially be addressed even as early as grade 1. A standard psychological evaluation should be considered to insure consistency of retention decisions for grade 1 pupils.

2. The finding of this study is that a high proportion of *"younger"* students are retained. This finding is clearly consistent with the Horseheads Central Schools' current planning of an early school developmental continuum and developmental philosophy.

3. Mother's education free lunch as socio-economic indicators, were both seemingly related to the incidence of retention. This finding is suggestive of the need to develop social, parental, and home-based programs.

   The following vaiables are related to the probability of being retained:

   1. Gender
   2. Lower Intelligence
   3. Lower Socio-Economic Status (Free or Reduced Lunch)
   4. Lower Tested Grade 1 Achievement
   5. Mother's Education
   6. Younger Chronological Age

4. Due to differences in average achievement performance and tested intelligence for retained pupils,the district should consider adopting guidelines.